



CLARK COUNTY WASHINGTON

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1300 Franklin Street
PO Box 9810
Vancouver, WA 98666-9810
564.397.6118

February 5th, 2021

To: Keunyea Song, SAM Coordinator
Washington State Department of Ecology, Olympia, WA

From: Chad Hoxeng
Interim Monitoring and Assessment Supervisor, Clark County Public Works, Clean Water Division, Vancouver, WA

Subject: Status and Trends Monitoring of Urban Streams in Clark and Cowlitz Counties in the Lower Columbia River Region (LCUS) QAPP Amendment

Clark County Public Works, Clean Water Division (CWD) is amending the Ecology approved LCUS QAPP to reflect removing dissolved metals in sediment. This is a minor change due to errors listed in the original LCUS QAPP template that provided guidance for CWD to develop the final LCUS QAPP. The parameters to be removed include dissolved arsenic, cadmium, chromium, copper, lead and zinc in sediment.

The decision to remove the listed parameters above came after a discussion via email between the LCUS Project Manager and Ecology's SAM Scientist.

The following table (Table 13, page 30) of the LCUS QAPP will be modified to reflect these changes and is notated below.



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the Clark County ADA Office

Voice 360.397.2322 **Relay** 711 or 800.833.6388
Fax 360.397.6165 **Email** ADA@clark.wa.gov

Table 1. Measurement quality objectives for sediment parameters.

Sediment parameters	Analysis methods in sediment MQO	Reporting limit target	Lab replicate (RPD) ¹	Matrix spike ² (% recovery)	Matrix spike duplicate (RPD) ³	Control standard/surrogate (% recovery)
		Sensitivity	Bias and precision	Bias and accuracy	Bias and precision	Bias and accuracy
Conventional Parameters						
Grain Size on <2 mm sieved sediment	PSEP PS	Sensitivity = 1.0%	≤20%	N/A	N/A	N/A
Total Organic Carbon	PSEP PS	Sensitivity=0.1%	≤20%	N/A	N/A	80-120
Metals						
Total and dissolved As, Cd, Cr, Cu, Pb, Zn	EPA 200.8	(0.2, 0.1, 0.2, 0.5, 0.5, 0.5) mg/kg dw	≤20%	75–125	≤20%	85–115 (spiked blank) ERA Soil ³
						80–120 (As, Cd, Cu, Pb, Zn)
						79–120 (Cr)
Semi volatile organics						
Polycyclic aromatic hydrocarbon (PAH) compounds	EPA 8270D SIM (GC-MS)	1-5 µg/kg dw	Compound specific ≤40%	Compound Specific	≤40%	Spiked blank compound-specific
				50–150		50–150 ⁴

[1] The Relative percent difference (RPD) is calculated when at least one of the result values is above the practical quantitation limit; if both values are below then the RPD is not calculated.

[2] For inorganics, the *Laboratory Program Functional Guidelines* state that the spike recovery limits do not apply when the sample concentration exceeds the spike concentration by a factor of 4 or more (EPA 2010)

[3] ERA solid LCS, “metals in Soil” the catalogue number is 540 may be needed if using a contract lab

[4] Semivolatile surrogate recoveries are compound-specific. MQOs are based on Lubliner (2014).